

Project No. 3074
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MARCH & APRIL MONTHLY PROGRESS REPORT
MONTANA DOT "PERFORMANCE PREDICTION MODELS"

Monthly Progress	Susan Sillick, MT DOT
Report To:	Jon Watson, MT DOT
Agency:	Fugro-BRE
Contract No.:	HWY-30604-DT
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1.0 CURRENT MONTH WORK ACTIVITIES AND ACCOMPLISHMENTS

Task 1 – Literature Review

Complete. A draft memorandum was prepared and submitted to the Department in October 2001 that summarizes the models to be considered within this project. This memorandum will be updated when the calibration and validation of the 2002 Design Guide distress prediction models is completed around April 2002.

Task 2 – Review of MT DOT Pavement-Related Data

Complete. This task is complete. However, Fugro-BRE will continue to monitor the LTPP database and update any missing data on the test sections with time.

Task 3 – Establish the Experimental Factorials

Complete.

Task 4 – Develop Work Plan for the Monitoring and Testing Plans

Complete. The monitoring and testing work plan will be revised after the materials sampling and initial analysis of the data is complete under Tasks 6 and 7.

Task 5 – Presentation of Work Plan to MT DOT

Complete.

Task 6 – Implement Work Plan – Data Collection

On-going activities. Planning meetings were conducted with MDT personnel in March and April to finalize the materials sampling schedule. This schedule was confirmed in early April and Dr. Weng On Tam led a team consisting of PB and MDT personnel on a three-week trip to sample materials from 10 test sections across the state. The team also conducted deflection testing, distress surveys and verified the pavement structure on these test sections. These materials were stored by PB in Helena till May 13 when they were shipped to Austin, Texas.

The material is expected to reach the Fugro-BRE, Inc. offices during the second to last week in May. At this time, members of the project team will sort, log and prepare the materials for testing. In addition, the materials testing plan will be updated keeping in mind the allocated budget for testing. It is expected that the bulk of the testing will occur during the months of June and July.

The project team will also be contacting MDT to begin identifying new pavement sections that will be constructed later this summer or during the next construction season for use in the experimental plan. These sections will need to be constructed with Superpave designed hot-mix and will be sampled by the project team during the time of construction.

The project team began review and analysis of the longitudinal profiles measured at each of the sites by Department personnel. The IRIs and longitudinal profiles will be included in the test section reports that will be prepared after the test sections have been cored and sampled.

Fugro-BRE also has been in contact with Dr. Vince Janoo and has obtained a copy of the seasonal data and draft report entitled "Performance of Montana Highway Pavements During Spring Thaw." This data will be used in analyzing the response and performance data monitored and obtained from other test sections.

Task 7 – Data Analyses and Calibration of Performance Prediction Models

The backcalculation of elastic layer modulus at each of the non-LTPP test sections will be initiated once the layer thickness measurements have been confirmed in the lab from the core samples gathered during the materials sampling. It is expected that the backcalculation will occur during June.

Task 8 – Final Report and Presentation of Results

No activity.

2.0 PROBLEMS/RECOMMENDED SOLUTIONS

Mr. Harold Von Quintus resigned from Fugro-BRE effective April 11, 2002. He has started work for ERES, a division of Applied Research Associates, but will continue to participate actively as a consultant to the project. As previously discussed with MDT staff, it is proposed that Brian Killingsworth take over as Principal Investigator. Correspondence covering the details of the transition has been transmitted under separate cover. No other problems were encountered during last month and none are anticipated for next month.

3.0 NEXT MONTH'S WORK PLAN

The activities planned for next month are identified and discussed below.

- Coordinate with Department personnel on an as-needed basis.
- Inventory and photograph material sampled this past month.
- Update materials testing plan.
- Continue analysis of all data collected at the LTPP and non-LTPP test sections.
- Finalize the computation of IRIs from the longitudinal profile measurements.
- Continue preparation of site and test section reports for each of the non-LTPP sections.

4.0 FINANCIAL STATUS

Following is a summary of the estimated expenses incurred during the months of March and April.

Cost Element	Previous Month's Cumulative Cost, \$	Current Monthly Expenditures (Estimated), \$	Cumulative Costs (Estimated), \$
Direct Labor	12,780	4,344	17,124
Overhead	18,275	6,212	24,488
Consultants/Subcontractors	7,615	0	7,615
Travel	4,580	2,935	7,515
Testing	0	0	0
Other Direct Costs	166	0	166
Fee	4,342	1,349	5,691
Total Costs	47,758	14,841	62,599

The following table provides a summary of the total expenditures by the Montana and FHWA fiscal years in comparison to the allocated funds for each fiscal year.

Montana DOT Fiscal Year				FHWA Fiscal Year			
Fiscal Year		Allocated Funds Cumulative, \$	Expenditures Cumulative, \$	Fiscal Year		Allocated Funds Cumulative, \$	Expenditures Cumulative, \$
6/1-6/30	2001	15,000	*0	6/1-9/30	2001	65,000	31,996
7/1-6/30	2002	218,969	62,599	10/1-9/30	2002	258,969	**30,603
7/1-6/30	2003	348,969	---	10/1-9/30	2003	358,969	---
7/1-6/30	2004	388,969	---	10/1-9/30	2004	398,969	---
7/1-6/30	2005	428,969	---	10/1-9/30	2005	438,969	---
7/1-6/30	2006	498,969	---	10/1-9/30	2006	498,969	---
TOTAL		498,969	62,599			498,969	62,599

*June 2001 expenditures were combined with July 2001 expenditures.

**PB invoices have not yet been received for work completed for the fiscal period of March through April 2002.

Accumulated expenses for the project, estimated through the end of April are represented graphically in the following line chart. The financial chart of actual versus planned expenditures shows that the project team is billing less than expected. This difference is a result of postponing materials sampling to Spring 2002. We expect that the actual versus planned expenditures will become more equal in the coming months after the materials sampling and testing has been completed. In fact, the team expects the expenditures to be back on track by the end of September 2003 as shown in the following table.

MDT FY end Jun 02	\$ 133,488.30
FHWA FY end Sep 02	\$ 220,168.30
MDT FY end Jun 03	\$ 336,383.30
FHWA FY end Sep 03	\$ 359,648.30

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Monthly Progress Report - Financial Status

Contractor: Fugro-BRE
Montana DOT: "Performance Prediction Models"
Fugro-BRE Project No.: 3074

Contract No.: HWY-30604-DT

